Handout 1: Embedded Formative Assessment of Language and Content
Cardenas, 2013

3rd Grade
28 students
100% qualified for free or reduced lunch
Approximately 80% designated English language learners

Next Generation Science Standards

Disciplinary Core Ideas:

Structure and Function:

3-5 Organisms have both internal and external macroscopic structures that allow for growth, survival, behavior, and reproduction.

Engaging in Argument from Evidence	**LS1.A: Structure and Function**	**Systems and System Models**
Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s). ☐ Construct an argument with evidence, data, and/or a model.	☐ Plants and animals have both internal and external structures that serve various functions in growth, survival, behavior, and reproduction.	☐ A system can be described in terms of its components and their interactions.
Connections to other DCIs in fourth grade: N/A		

ELA College and Career Ready Standards

Reading

Key Ideas and Details

- Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

Craft and Structure

- Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.

Writing

- Conduct short research projects that build knowledge about a topic.
- Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.

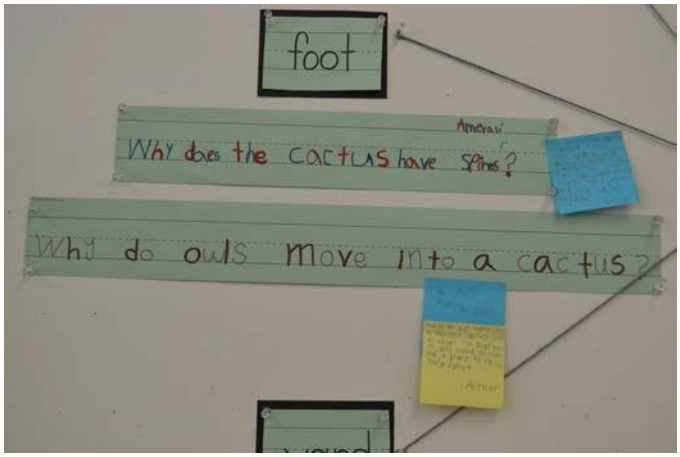
Speaking and Listening

- Report on a topic or text, tell a story, or recount an experience with

1. **Engagement – First---hand Experience Observation/Sketching**
   Teacher Input: Guiding questions to deepen student thinking/observations of cactuses
   - What do you notice?
   - What are some similarities and or differences between the plants you see here and those we have at school?
   - Why do you think they have these particular features?

   Language Opportunities:
   - "Partner share": Partners share their observations
   - Small groups of students share what they notice (particular features) and share predictions (I think…) and followed by supporting their predictions with evidence found through observation (What makes you say that?)

   Formative Assessment:
   - Note questions students are asking based on observations
   - Note language they are using
   - Assessing background knowledge from discussions



2. **Brainstorming – Questioning: Sharing and categorizing questions**

Teacher Input:

- Provide students the opportunity to ask questions based on their observations to further their learning about desert plants. What would you like to know or are unsure of about desert plants?
- After students have an opportunity to share questions with the class, together they sort and categorize all questions, according to the system below
- Based on their categories, students refine questions asked

  <u>Inch Question</u>
  - Recall
  - Requires one---word answer
  - Requires little research
  - Answer can be found in one source

  <u>Foot Question</u>
  - Comprehension
  - Requires students to read a page or several pages and come up with an answer using their own words

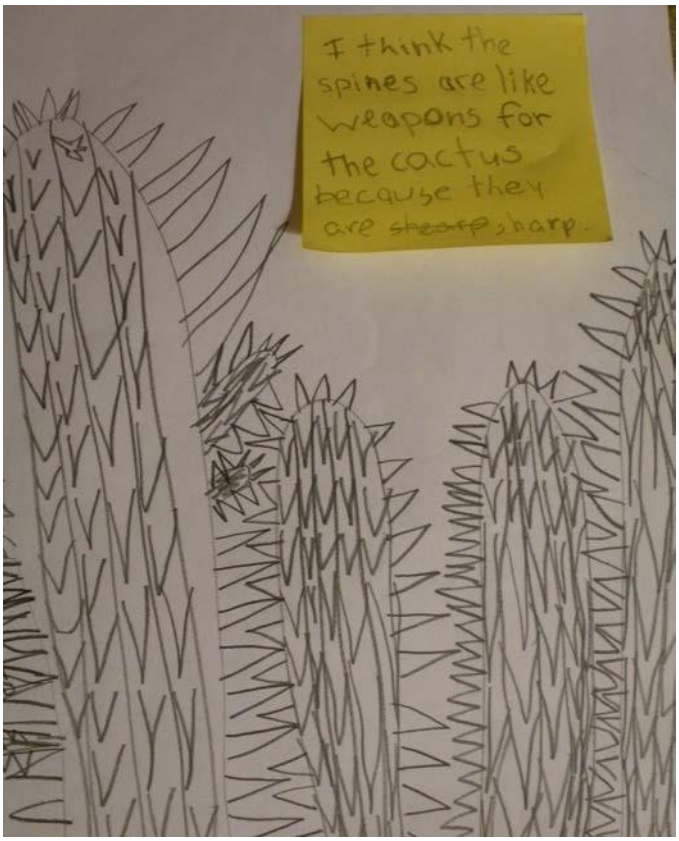
  <u>Yard Question</u>
  - Synthesis
  - Requires students to look for the answer in a variety of sources, synthesize that information, and draw their own conclusions

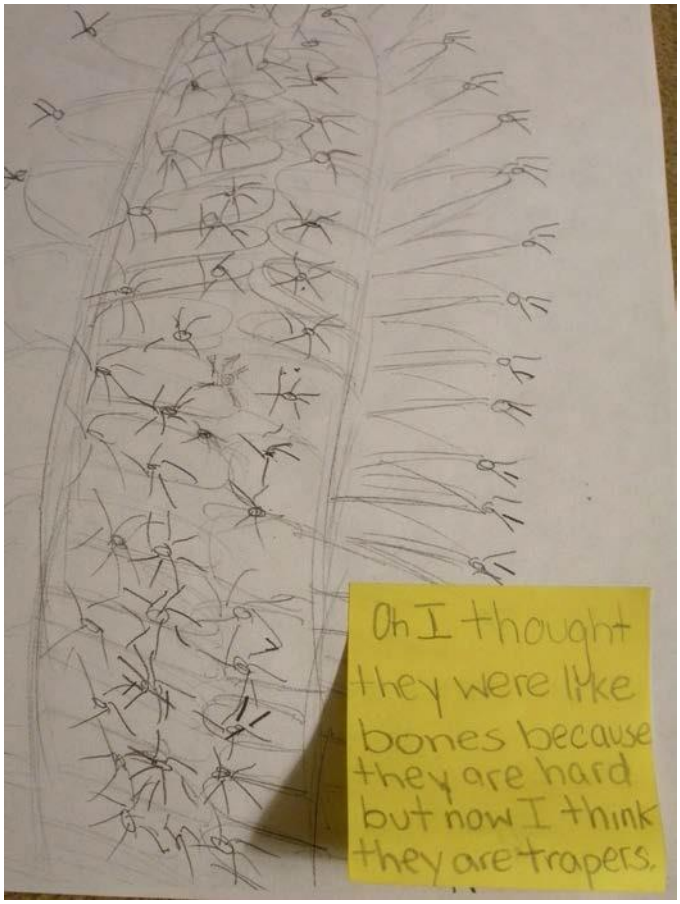
Language Opportunities:

- Students discuss and negotiate as they sort and categorize questions
- In small groups students take all questions in a particular category and refine questions

Formative Assessment:

- Note the use of language students are using as they negotiate in which categories they belong
- Note students' justifications and use of evidence
- Provide feedback to students





3. **Peer Discussion – Why do cactuses have spines?**

Teacher Input:

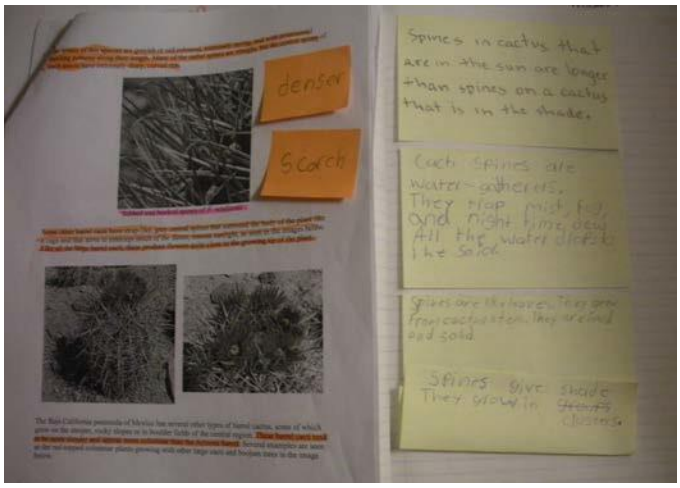
- Provide students with examples of student sketch work, pictures taken during field trip, and other images of different cactuses found in books to observe

Language Opportunities:

- Using their original sketch work of desert plants/cactus, students write on a post-it and share with a partner why they think cactuses have spines
- Along with their partner, students join another pair of students to form a small group and share their responses

Formative Assessment:

- Assess student responses and evidence gathered through observation to support their thinking (What evidence was used to support their thinking?)



4. **Guiding Questions – Reading---Research**

Teacher Input:

- Using a leveled reading passage, teacher models how to highlight key information related to a specific question
- Teacher think---aloud --- what to do with tricky words that might be new to us as readers, or parts of the text that might make it challenging for us to understand the text
- Using the Reading With a Question in Mind handout, teacher models to students how to stop, highlight, and jot down information being gathered

Language Opportunities:

- Students read a selection of texts, highlighting key information related to their question
- Students discuss findings with a partner and compare notes

Formative Assessment:

- Assessing students' highlighting skills --- are they capturing key information related to their question --- conferences
- Assessing students' use of background knowledge from observations
- What words and phrases are being documented by students as being new and or challenging
- Provide feedback to students

5. **Synthesizing – Sorting through notes**

Teacher Input:

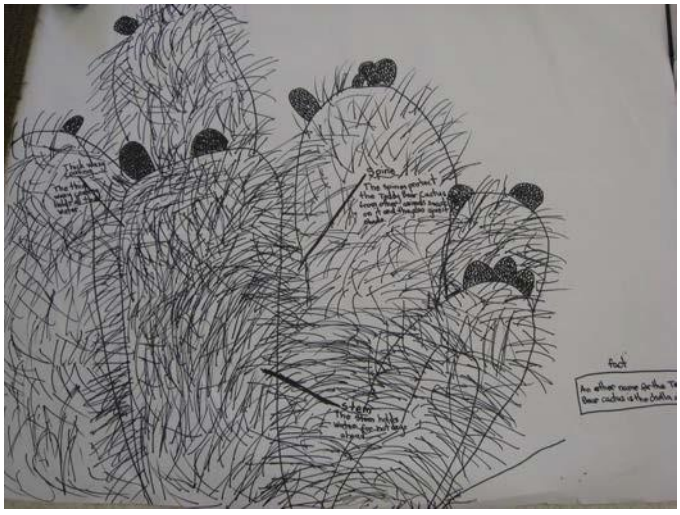
- Teacher think---aloud as questions are revisited and asks: “Does this fact from the text help answer my question? What about this fact helps answer my question? How do I know? What keywords or sentences help me to think that?
- Teacher provides students with poster size paper to jot down their findings with a partner

Language Opportunities:

- Students work with a partner to chart all their facts, and information gathered about why cactuses have spines

Formative Assessment:

- What textual evidence are students using to support their statement?
- Provide feedback to students



6. Synthesizing Information ---

Teacher Input:

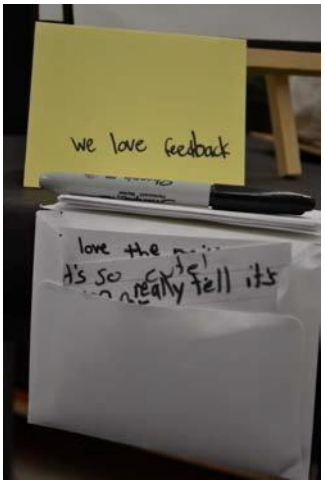
- Provide a wide range of materials including recyclables for students to use in representing their understanding of why cactuses have spines
- Provide a blue print organizer to be used to frame ideas for representation

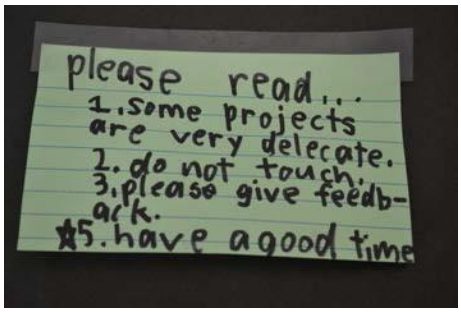
Language Opportunities:

- In a small group students represent what they've learned about desert cactuses and their features (discuss, justify, provide evidence and negotiate what and how to represent)
- Together they create a blue print of what their representation might look like and what key features they want to highlight
- Students negotiate the use of materials

Formative Assessment:

- Assessing student oral language as they describe what they are working on (listening to group discussions and questioning)
- Assessing what information they are using and how the information is being shared/ represented





7. Presentation

Teacher Input:

- Teacher provides an outline to help students structure their presentation
- Teacher reviews what is expected of an audience and presenter

Language Opportunities:

- Small groups of students share with the whole class their representation and speak to it
- Group will answer questions asked by the audience

Formative Assessment:

- Assessing sentence structure, vocabulary use and clarity of explanation
- Assessing information being shared
- Teacher and peer feedback

8. Peer Feedback:

Teacher Input:

- Provide students the opportunity to reflect and refine their work (both independent and small group)

Language Opportunities:

- Students ask clarifying questions
- Students are encouraged to explain their thinking
- Students justify their reasoning using evidence found in text and or observations made

Formative Assessment:

- Assessing students' reflections and revisions made to their work
- Assessing students' explanation of their thinking